

REMARKS

Claims 8-16 are pending in the application; claims 1-7 and 17 are canceled.

Claim Objections

The claims have been revised in view of the examiner's remarks and the deficiencies have been corrected.

Claim Rejections - 35 U.S.C. 112

Claims 9-17 stand rejected under 35 U.S.C. 112. Proper dependency has been provided in the claims.

In regard to claim 12, it is respectfully submitted that the polysaccharide is defined as containing both of the structures shown; claim 12 therefore differs from claims 10 and 11.

In claim 14, "analog" has been canceled.

Claims 14 to 16 now properly depend from claim 8 and examination of the claims on their merits is respectfully requested.

Rejection under 35 U.S.C. 101

Claim 17 is canceled.

Rejection under 35 U.S.C. 102 and 103

Claims 8-13 stand rejected under 35 U.S.C. 102(b) as being anticipated by Greene (US 5,770,711).

Claims 8-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Greene (US 5,770,771).

The cited prior art reference to Greene discloses cross-linked polysaccharides as evidenced by the product description in the examples. The reaction conditions selected according to Greene lead to a product that can be filtered off (i.e., it is insoluble) and subjected to Absorbency Under Load (AUL) tests (see examples 1, 3), i.e., it is a solid (the samples used in AUL are retained on a No. 50 mesh screen; see col. 6, lines 32-38). Therefore, the product of Greene is cross-linked via the carboxyl groups and the carboxyl groups are not preserved during the reaction.

The product according to the present invention can be obtained at high yield and with excellent substitution ratios (0.15 to 0.6). In contrast to the prior art, the product according to the invention is water-soluble and yields clear solutions. Note in particular that the analytical data (IR and NMR; Example 5) clearly indicate that there are no ester groups

present in the products according to the invention (supporting data are provided in the Figures and in Tables 1 and 2). The present invention therefore provides malatyl polysaccharides that have free carboxyl groups and are not crosslinked and therefore water-soluble and available for use in a wide range of applications.

The prior art does not suggest a pH value of 9-13 for carrying out the reaction, at which pH value, as evidenced by the instant invention, soluble products that are not cross-linked and have intact carboxyl groups are produced; as evidenced by the products of the prior art, the reaction conditions of Greene lead to cross-linked products that are insoluble (prior to being subjected to cross-linking reactions), can be filtered and subjected to AUL tests.

Therefore, the product and the method as claimed in claims 8 and 14, respectively, are not anticipated or obvious in view of the prior art.

CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or e-mail from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on December 1, 2003,

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